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AN ANNOTATED CHECK-LIST OF MICHIGAN MAMMALS.

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The principal work of the Museum, at least during the past 12 years, has been the preservation and organization of the data on the abundance, local distribution and habits of the species composing the Michigan fauna. The task of gathering the data on the mammals has fallen to the writer, but owing to the small number of local naturalists interested in the group, the difficulties in studying the forms, and the fact that much of the writer's time has been consumed in the work on birds, the information at hand is still too meager to permit of the preparation of the proposed monograph on the group.

The present list has been prepared in the hope of stimulating an interest in the subject that will result in the acquisition of additional data. It is based upon the specimens in the Museum, the biological investigations of the Museum and the Michigan Geological and Biological Survey, the references in

the literature, and interviews with trappers and local naturalists. To increase the reliability and usefulness of the list only those records are included that the writer believes to be free from doubt, and the nature of the data for each species is given. The "specimens" referred to are in the Museum collection, the "observations" refer to live specimens or fresh skins seen by the writer or Alexander G. Ruthven, and the "records" are the reliable references in the literature, the reports of well-informed observers, and the specimens preserved in other collections. The data is summarized by counties, and for convenient reference a base map giving the political boundaries is added. Observations and records are omitted when they are for counties from which specimens have been secured and deposited in the Museum collection.

It should be pointed out that, while there are doubtless in the Michigan fauna other species than those listed, quite as important as possible additions to the list is complete information on the distribution within the state and the habits of even the most common forms. This is a profitable field of study for local naturalists, as the data to be secured is indispensible to a proper understanding of the mammalian fauna of the state.

In the literature the following species have been erroneously reported from Michigan: *Citellus franklinii* (Sabine), *Reithrodontomys humilis* (Aud. & Bach.), *Geomys busarius* (Shaw), *Mustela allegheniensis* (Rhoads), *Mustela longicauda* Bonaparte, *Microtus ochrogaster* (Wagner), *Mustela cicognanii richardsonii* (Bonaparte). It should also be stated that the latest study of the woodchucks (Howell, A. H., Proc. Biol. Soc. Wash., XXII, pp. 13-18) recognizes three forms in Michigan, *Marmota monax, M. monax rufescens* and *M. monax canadensis*. Previous to this revision all Michigan specimens were referred to *M. monax*, so that it is not possible to distribute the records among the subspecies with certainty. The writer has arranged the records according to geographic probabilities, grouping them under the subspecies which have been taken in the general region.

LIVING AND RECENTLY EXTINCT SPECIES.

1. **Didelphys virginiana** (Kerr). Virginia Opossum.
   Specimens: Washtenaw.
   Records: Jackson, Genesee, Wayne, Monroe, Calhoun, Cass, Oakland, Macomb, Hillsdale, Ottawa, Ingham, Eaton, Gratiot, Isabella.
2. **Rangifer caribou** (Gmelin). Woodland Caribou.
   Records: Keweenaw (Isle Royale), Charlevoix (Beaver Island), Luce, Chippewa, Dickinson.
3. **Alces americanus** (Jardine). Eastern Moose.
   Specimens: Chippewa, Schoolcraft.
   Records: Presque Isle, Missaukee, Huron, Ontonagon, Sanilac, Oakland, Saginaw, Alger, Gogebic, Mackinac, Luce, Marquette, Genesee, Dickinson.
4. **Cervus canadensis** (Erxleben). East American Wapiti. Extinct in Michigan.
   Specimens: Washtenaw (antlers and parts of antlers and skulls), Ingham (basal half of antlers).
   Observations: Jackson (antlers with parts of skull).
   Records: Washtenaw, Huron, Tuscola, Sanilac, Ingham, Saginaw, Alpena, Emmet, Mason, Gratiot, Benzie, Berrien, Wayne, Oakland.
5. **Odocoileus americanus borealis** (Miller). Northern Virginia Deer.
   Specimens: Dickinson, Schoolcraft, Wexford, Washtenaw, Branch, Otsego, Chippewa, Ontonagon.
   Observations: Luce, Cheboygan, Presque Isle, Bay, Houghton, Huron (introduced).
   Records: Jackson, Oscoda, Crawford, Alcona, Alger, Luce, Monroe, Huron, Genesee, Iron, Wayne, Ingham, Kalamazoo, Mecosta, Oceana, Montmorency, Marquette, Gogebic, Mackinac, Calhoun, Allegan, Lenawee, Eaton, Benzie, Oakland, Sanilac, Shiawassee, Barry, Berrien, Saginaw, Manistee, Montcalm, Alpena, Cheboygan, Presque Isle, Osceola.
6. **Bison bison** (Linnaeus). American Bison. Extinct in Michigan.
   Records: Jackson, Monroe, Wayne, Kalamazoo, Berrien, Oceana (?).
7. **Sciurus niger rufiventer** (Geoffroy). Fox Squirrel.
   Specimens: Washtenaw, Livingston, Huron, Osceola.
   Observations: Oakland, Monroe, Jackson, Kalamazoo, Lenawee, Wayne.

Records: Genesee, Saginaw, Lenawee, Ottawa, Wayne, Monroe, Charlevoix, Presque Isle, Ingham, Oceana, Cass, Montcalm, Gratiot, Muskegon, Chippewa, Luce, Jackson, Cheboygan, Arenac (Charity Island, introduced and later exterminated).

8. **Sciurus carolinensis leucotis** (Gapper). Northeastern Gray Squirrel.
Specimens: Washtenaw, Livingston, Montcalm, Cheboygan.
Observations: Oakland, Wayne, Monroe, Jackson.
Records: Crawford, Oscoda, Genesee, Ionia, Alger, Chippewa, Ottawa, St. Clair, Wayne, Oceana, Ingham, Monroe, Montmorency, Dickinson, Gogebic, Gratiot, Cass, Marquette, Osceola.

9. **Sciurus hudsonicus** (Erxleben). Hudson Bay Red Squirrel.
Specimens: Keweenaw (Isle Royale).

10. **Sciurus hudsonicus loquax** (Bangs). Southeastern Red Squirrel.
Specimens: Washtenaw, Montcalm, Kalamazoo, Oscoda, Roscommon, Ontonagon, Houghton, Livingston, Dickinson, Huron, Cheboygan, Ingham, Osceola, Chippewa.
Observations: Jackson, Wayne, Monroe, Lenawee, Oakland, Crawford, Alcona, Iosco, Bay, Saginaw, Mackinac, Luce, Schoolcraft, Alger, Marquette, Baraga.
Records: Crawford, Iosco, Alcona, Wayne, Monroe, Lenawee, Jackson, Ottawa, Alger, Gogebic, Gratiot, Presque Isle, Luce, Mackinac.

11. **Eutamias quadrivittatus neglectus** (Allen). Lake Superior Chipmunk.
Specimens: Houghton, Ontonagon, Dickinson, Chippewa.
Observations: Alger.
Records: Alger, Marquette, Delta, Schoolcraft, Iron.

12. **Tamias striatus lysteri** (Richardson). Northeastern Chipmunk.
Specimens: Washtenaw, Montcalm, Ontonagon, Dickinson, Huron, Oakland, Cheboygan, Marquette, Osceola, Chippewa.
Observations: Jackson, Wayne, Monroe, Lenawee, Livingston, Bay, Roscommon, Crawford, Oscoda, Iosco, Alcona, Mackinac, Calhoun.
Records: Jackson, Wayne, Monroe, Lenawee, Livingston, Kalamazoo, Oscoda, Crawford, Genesee, Saginaw, Gratiot, Alger, Ottawa, Cass.

13. **Citellus tridecemlineatus** (Mitchell). Striped Spermophile.
Specimens: Washtenaw, Roscommon, Osceola.
Observations: Oakland, Livingston, Jackson, Lenawee, Oscoda.
Records: Mecosta, Ingham, Oakland, Oscoda, Crawford, Emmet, Ottawa, Genesee, Berrien, Cass, Montcalm, Livingston, Jackson, Marquette.

14. **Marmota monax** (Linnaeus). Woodchuck.
Specimens: Cass.

15. **Marmota monax rufescens** Howell. Rufescent Woodchuck.
Specimens: Washtenaw, Oscoda, Huron.
Observations: Wayne, Jackson, Livingston, Oakland.
Records: Crawford, Genesee, Lapeer, Ottawa, Berrien, Ingham, Wayne, Montmorency, Montcalm, Gratiot, Jackson, Livingston, Oakland, Cheboygan.

16. **Marmota monax canadensis** (Erxleben). Canada Woodchuck.
Specimens: Ontonagon, Chippewa.
Records: Gogebic, Dickinson, Marquette.

17. **Sciuropterus sabrinus** (Shaw). Northern Flying Squirrel.
Specimens: Ontonagon.
Observations: Alger, Dickinson.
Records: Dickinson, Gogebic, Chippewa, Alger, Marquette.

18. **Sciuropterus sabrinus macrotis** (Mearns). Canada Flying Squirrel.
Specimens: Montcalm, Osceola.

19. **Sciuropterus volans** (Linnaeus). Southern Flying Squirrel.
Specimens: Washtenaw, Jackson, Gratiot, Livingston, Huron.
Observations: Oakland, Lenawee.
Records: Wayne, Ottawa, Berrien, Ingham, Lenawee, Cass, Oakland.

20. **Castor canadensis michiganensis** Bailey. Woods Beaver.
Specimens: Alger, Keweenaw, Dickinson, Chippewa, Saginaw.
Observations: Cheboygan, Presque Isle, Saginaw, Ontonagon and Washtenaw (dams and houses).
Records: Jackson, Wayne, Wexford, Kalkaska, Alger, Oscoda, Crawford, Marquette, Presque Isle, Cheboygan, Luce, Ontonagon, Genesee, Ingham, Montmorency, Schoolcraft, Baraga, St. Clair, Keweenaw (Isle Royale), Gogebic, Mackinac, Montcalm, Allegan, Sanilac, Iron, Midland, Washtenaw, Oceana.

21. **Epimys norvegicus** (Erxleben). Norway Rat.
Specimens: Washtenaw.
Observations: Wayne, Jackson, Huron.
Records: Wayne, Jackson, Huron, Livingston, Oakland, Lenawee.

22. **Epimys rattus** (Linnaeus). Black Rat. Extinct in Michigan.
Records: Washtenaw, Wayne.

23. **Mus musculus** (Linnaeus). House Mouse.
Specimens: Washtenaw, Huron, Cheboygan, Cass, Chippewa, Lenawee.
Observations: Wayne, Jackson, Lenawee, Kalamazoo, Livingston.

24. **Peromyscus leucopus noveboracensis** (Fisch.). Northern White-footed Deer Mouse.
Specimens: Washtenaw, Ottawa, Kalamazoo, Oscoda, Huron, Osceola, Cheboygan, Cass.
Observations: Oakland, Jackson, Livingston, Lenawee, Wayne.
Records: Wayne, Oakland, Jackson, Lenawee, Livingston, Crawford, Huron, Genesee, Berrien, Ingham, Montcalm.

25. **Peromyscus maniculatus** (Wagner). Clouded White-footed Mouse.
Specimens: Keweenaw (Isle Royale).

25. **Peromyscus maniculatus gracilis** (LeConte). Michigan Mouse.
Specimens: Oscoda, Ontonagon, Cheboygan, Dickinson, Chippewa, Crawford, Iron.

27. **Peromyscus maniculatus bairdii** (Hoy and Kenn.). Prairie White-footed Mouse.
Specimens: Washtenaw, Huron, Cass.

28. **Evotomys gapperi** (Vigors). Red-backed Mouse.
Specimens: Ontonagon, Dickinson, Cheboygan.
Records: Keweenaw (Isle Royale) (?).

29. **Microtus pennsylvanicus** (Ord). Meadow Vole.
Specimens: Washtenaw, Oakland, Dickinson, Huron, Cass, Cheboygan, Chippewa.
Records: Crawford, Oscoda, Wayne, Genesee, Ingham, Montcalm, Gratiot, Livingston, Jackson, Lenawee, Osceola.

30. **Pitymus pinetorum scalopsoides** (Aud. and Bach.). Northern Pine Mouse.
Specimens: Oakland.
Records: Ingham.

31. **Ondatra zibethica** (Linnaeus). Northern Muskrat.
Specimens: Washtenaw, Livingston, Keweenaw (Isle Royale), Dickinson, Huron, Cheboygan, Osceola, Chippewa.
Observations: Lenawee, Jackson, Wayne.
Records: Ontonagon, Ottawa, Genesee, Berrien, Monroe, Ingham, Presque Isle, Oceana, Wayne, Lapeer, Mason, St. Joseph, Mackinac, Delta, Sanilac, Jackson, Allegan, Clinton, Van Buren, Hillsdale, Kalkaska, Lenawee, Iron, Montmorency, Oakland, Calhoun, Baraga, Cass, Branch, Gogebic, Crawford, Gratiot, Montcalm, Barry, Grand Traverse, Marquette, Arenac (Charity Island).

32. **Synaptomys cooperi** (Baird). Cooper's Lemming.
Specimens: Washtenaw, Cheboygan, Cass.

33. **Zapus hudsonius** (Zimm.). Northern Jumping Mouse.
Specimens: Washtenaw, Kalamazoo, Ontonagon, Dickinson, Huron, Chippewa, Oakland.
Records: Muskegon, Schoolcraft, Keweenaw, Otsego, Branch, Gratiot, Cass.

34. **Napaeozapus insignis** (Miller). Woodland Jumping Mouse.
Specimens: Crawford, Oakland, Ontonagon.
Records: Alcona.

35. **Erethizon dorsatum** (Linnaeus). Canada Porcupine.
Specimens: Ogemaw, Roscommon, Ontonagon, Huron, Dickinson, Osceola.
Observations: Presque Isle, Cheboygan, Chippewa.
Records: Washtenaw, Jackson, Oscoda, Crawford, Alger, Alcona, Presque Isle, Cheboygan, Chippewa, Iron, Ingham, Oceana, Missaukee, Mecosta, Montmorency, Cass, Gogebic, Montcalm, Gratiot, Mackinac, Allegan, Muskegon.

36. **Sylvilagus floridanus mearnsii** (Allen). Mearn's Cottontail.
Specimens: Washtenaw, Eaton, Livingston, Huron, Osceola.
Observations: Wayne, Monroe, Lenawee, Jackson, Oakland, Arenac (Charity and Little Charity Islands).
Records: Ottawa, Genesee, Berrien, Cass, Charlevoix, Oceana, Presque Isle, Wayne, Ingham, Oakland, Jackson, Monroe, Grand Traverse, Crawford, Montcalm, Gratiot, Muskegon, Lenawee, Cheboygan, Hillsdale, Arenac (Charity and Little Charity Islands).

37. **Lepus americanus** (Erxleben). Varying Hare.
Specimens: Keweenaw (Isle Royale), Osceola, Oscoda, Huron, Chippewa.

Observations: Washtenaw, Oakland, Livingston, Arenac (Charity Island).
Records: Washtenaw, Livingston, Ionia, Crawford, Presque Isle, Cheboygan, Marquette, Montcalm, Gratiot, Ingham, Otsego, Arenac (Charity Island).

38. **Lepus americanus phaeonotus** (Allen). Minnesota Varying Hare.
Specimens: Ontonagon, Dickinson, Houghton.

39. **Felis cougar** (Kerr). Puma. Extinct in Michigan.
Records: Washtenaw, Jackson, Ontonagon, Oceana, Mason, Ingham, Montcalm, Allegan, Calhoun, Kalamazoo, Eaton.

40. **Lynx canadensis** (Kerr). Canada Lynx.
Specimens: Keweenaw (Isle Royale).
Records: Washtenaw, Oscoda, Huron, Monroe, Ontonagon, Baraga, Chippewa, Alcona, Alpena, Marquette, Schoolcraft, Kalkaska, Mackinac, Muskegon, Isabella, Crawford, Iron, Gogebic, Gratiot, Oakland, Sanilac, Dickinson.

41. **Lynx ruffus** (Gueldenstaedt). Bay Lynx.
Specimens: Ontonagon, Alger, Huron, Oakland, Wexford.
Observations: Chippewa (tracks observed by the writer).
Records: Washtenaw, Oscoda, Crawford, Monroe, Ingham, Delta, Marquette, Mackinac, Alcona, Baraga, Iron, Isabella, Dickinson, Gogebic, Wayne, Montcalm, Gratiot, Sanilac, Chippewa, Cheboygan, Osceola.

42. **Canis occidentalis** (Richardson). Timber Wolf.
Specimens: Alger.
Observations: Dickinson, Chippewa.
Records: Washtenaw, Jackson, Oscoda, Crawford, Cheboygan, Huron, Ontonagon, Mackinac, Monroe, Ingham, Muskegon, Delta, Baraga, Marquette, Schoolcraft, Chippewa, Menominee, Iron, Montmorency, Gogebic, Dickinson, Alcona, St. Clair, Kent, Kalamazoo, Branch, Cass, Lapeer, Macomb, Lake, Genesee, Van Buren, Wayne, Gladwin, Oakland, Calhoun, Oceana, Tuscola, Allegan, Eaton, Saginaw, Sanilac, Shiawassee, Barry, Livingston, Lenawee, Luce.

43. **Canis latrans** (Say). Coyote.
Specimens: Washtenaw (introduced).
Observations: Dickinson.
Records: Jackson, Monroe, Cass, Gogebic, Kalamazoo, Alger, Wayne, Menominee, Marquette.

44. **Vulpes fulva** (Desmarest). Red Fox.
Specimens: Washtenaw, Montmorency, Alger, Lapeer, Dickinson.
Observations: Oscoda, Chippewa, Jackson, Livingston, Oakland, Wayne, Huron.
Records: Kalkaska, Oscoda, Crawford, Huron, Ottawa, Genesee, Wayne, Ontonagon, Monroe, Ingham, Chippewa, Mackinac, Ionia, Delta, Clinton, Sanilac, Marquette, Mason, Hillsdale, Leelanau, Iron, Oakland, Livingston, Cass, Lenawee, Gogebic, Jackson, Arenac, Montcalm, Gratiot, Kalamazoo, Muskegon, Osceola, Cheboygan, Grand Traverse, Arenac (Charity Island).

45. **Urocyon cinereoargenteus** (Schreber). Gray Fox.
Specimens: Washtenaw.
Observations: Jackson, Wayne.
Records: Jackson, Missaukee, Crawford, Oscoda, Wexford, Delta, Charlevoix, Mason, Montmorency, Gogebic, Montcalm, Gratiot, Bay, Oakland, Cheboygan (?), Osceola.

46. **Ursus americanus** (Pallas). Northern Black Bear.
Specimens: Shiawassee, Chippewa.
Observations: Ontonagon, Dickinson.
Records: Washtenaw, Oakland, Jackson, Oscoda, Crawford, Cheboygan, Ontonagon, Huron, Dickinson, Ingham, Iron, Kalamazoo, Oceana, Monroe, Kalkaska, Schoolcraft, Baraga, Marquette, Delta, Alpena, Livingston, Montmorency, Gogebic, Mackinac, Marquette, Gratiot, Montcalm, Midland, Gladwin, Allegan, Wayne, Lenawee, Berrien, Barry, Clinton, Sanilac, Benzie, Genesee, Mackinac (Mackinaw Island), Houghton, Osceola, St. Clair.

47. **Procyon lotor** (Linnaeus). Raccoon.
Specimens: Washtenaw, Livingston, Chippewa, Huron, Dickinson, Arenac (Charity Island, introduced).
Observations: Lenawee, Jackson, Wayne, Oakland.
Records: Oscoda, Crawford, Presque Isle, Ontonagon, Ottawa, Genesee, Berrien, Wayne, Monroe, Jackson, Ingham, Oakland, Charlevoix, Allegan, Branch, Mackinac, Kalkaska, Schoolcraft, Hillsdale, Montmorency, Lenawee, Iron, Van Buren, Lapeer, Mason, St. Joseph, Menominee, Ionia, Delta, Calhoun, Baraga, Cass, Clinton, Montcalm, Gogebic, Crawford, Gratiot, Sanilac, Marquette, Cheboygan, Osceola, Barry.

48. **Taxidea taxus** (Schreber). American Badger.
Specimens: Washtenaw, Livingston, Dickinson, Lapeer, Charlevoix.
Observations: Presque Isle, Cheboygan.
Records: Jackson, Gratiot, Kent, Presque Isle, Oscoda, Crawford, Huron, Genesee, Lenawee, Chippewa, Ontonagon, Monroe, Ingham, Cass, Hillsdale, Montcalm, Kalamazoo, Kalkaska, Mason, Houghton, Sanilac, Oakland, Montmorency, Gogebic, Ontonagon, Gratiot, Ionia, Cheboygan, Osceola, Luce.

49. **Mephitis hudsonica** (Richardson). Northern Plains Skunk.
Specimens: Ontonagon, Dickinson.
Observations: Chippewa.
Records: Gogebic, Baraga, Delta, Iron, Mackinac, Chippewa, Marquette.

50. **Mephitis putida** (Boitard). Eastern Skunk.
Specimens: Washtenaw, Lenawee.
Observations: Jackson, Livingston, Crawford, Wayne, Oakland.
Records: Jackson, Oscoda, Crawford, Huron, Ottawa, Genesee, Berrien, Wayne, Monroe, Oceana, Ingham, Oakland, Branch, Calhoun, Cass, Clinton, Ionia, Allegan, Sanilac, Osceola, Van Buren, Lapeer, St. Joseph, Mason, Montmorency, Livingston, Hillsdale, Kalkaska, Cheboygan, Wayne, Gratiot, Montcalm.

51. **Gulo luscus** (Linnaeus). Wolverine. Extinct in Michigan.
Records: Tuscola, Ontonagon, Sanilac, Oscoda, Chippewa, Schoolcraft, Gogebic, Montmorency.

52. **Martes americana** (Turton). Eastern Marten.
Specimens: Delta, Dickinson.
Observations: Presque Isle, Keweenaw (Isle Royale), Cheboygan.
Records: Presquqe Isle, Wexford, Crawford, Huron, Keweenaw (Isle Royale), Missaukee, Schoolcraft, Muskegon, Mackinac, Kalkaska, Baraga, Chippewa, Montmorency, Alpena, Ontonagon, Marquette, Gogebic, Sanilac, Saginaw, Houghton.

53. **Martes pennanti** (Erxleben). Fisher.
Specimen: Chippewa.
Records: Washtenaw, Wexford, Presque Isle, Alger, Ingham, Missaukee, Baraga, Marquette, Schoolcraft, Mackinac, Alpena, Montmorency, Gogebic, Ontonagon, Houghton, Iron.

54. **Mustela vison** (Schreber). Northeastern Mink.
Specimens: Washtenaw, Keweenaw (Isle Royale), Houghton, Dickinson.
Observations: Wayne, Oakland, Oscoda, Jackson, Livingston, Cheboygan, Huron, Lenawee.
Records: Cheboygan, Oscoda, Crawford, Ontonagon, Chippewa, Iron, Huron, Ottawa, Genesee, Berrien, Monroe, Cass, Ingham, Oceana, Alger, Charlevoix, Wayne, Jackson, Hillsdale, Muskegon, Delta, Branch, Lenawee, Oakland, Ionia, Allegan, Clinton, Calhoun, Baraga, Sanilac, Van Buren, Mackinac, Marquette, Mason, St. Joseph, Montmorency, Livingston, Kalkaska, Schoolcraft, Gogebic, Lapeer, Montcalm, Gratiot, Otsego, Grand Traverse, Osceola.

55. **Mustela cicognani** (Bonaparte). Small Brown Weasel.
Specimens: Ontonagon, Keweenaw (Isle Royale), Chippewa.
Records: Marquette.

56. **Mustela noveboracensis** (Emmons). New York Weasel.
Specimens: Washtenaw, Keweenaw (Isle Royale), Dickinson, Huron, Lenawee, Livingston, Osceola.
Observations: Jackson, Wayne.
Records: Jackson Cass, Monroe, Ingham, Alger, Oceana, Hillsdale, Wayne, Baraga, Ionia, Delta, Houghton, Lapeer, Van Buren, Marquette, Mason, St. Joseph, Iron, Mackinac, Oakland, Montmorency, Chippewa, Ottawa, Branch, Gogebic, Montcalm, Gratiot, Barry, Cheboygan.

57. **Lutra canadensis** (Schreber). Canada Otter.
Observations: Chippewa, Dickinson.
Records: Washtenaw, Wexford, Oscoda, Crawford, Iron, Ontonagon, Monroe, Ingham, Jackson, Delta, Marquette, Montmorency, Allegan, Van Buren, Muskegon, Luce, Baraga, Dickinson, Mackinac, Gogebic, Chippewa, Jackson, Cheboygan, Menominee, Montcalm, Gratiot, Sanilac, Livingston, Osceola.

58. **Sorex personatus** (Geoffroy St. Hilaire). Masked Shrew.
Specimens: Huron, Washtenaw, Livingston, Roscommon, Chippewa, Ontonagon.
Records: Alger.

59. **Sorex richardsonii** (Bachman). Richardson's Shrew.
Records: Alger.

60. **Microsorex hoyi** (Baird). Hoy's Shrew.
Specimens: Washtenaw, Ontonagon.

61. **Blarina brevicauda** (Say). Short-tailed Shrew.
Specimens: Washtenaw, Jackson, Oakland, Ontonagon, Dickinson, Cheboygan.
Records: Benzie, Wayne, Gogebic, Montcalm, Gratiot, Osceola, Cass.

62. **Cryptotis parva** (Say). Small Shrew.
Specimens: Washtenaw.
Records: Ingham.

63. **Condylura cristata** (Linnaeus). Star-nosed Mole.
Specimens: Washtenaw, Kalamazoo, Ontonagon, Cheboygan, Dickinson, Branch, Osceola.
Observations: Wayne, Berrien, Houghton, Branch.
Records: Wayne, Berrien, Houghton, Ingham, Delta, Oakland, Chippewa, Mackinac, Gogebic, Gratiot.

64. **Scalops aquaticus machrinus** (Raf.). Prairie Mole.
Specimens: Washtenaw, Ingham, Wayne, Kalamazoo, Oscoda.
Observations: Livingston, Jackson, Lenawee.
Records: Jackson, Berrien, Cass, Ottawa, Montcalm, Gratiot, Crawford, Livingston.

65. **Myotis subulatus** (Say). Say's Bat.
Specimens: Arenac (Charity Island), Cheboygan, Keweenaw (Isle Royale), Dickinson, Ontonagon, Washtenaw.

66. **Myotis lucifugus** (LeConte). Little Brown Bat.
Specimens: Washtenaw, Kalamazoo, Keweenaw (Isle Royale), Chippewa.
Records: Wayne, Ingham.

67. **Lasionycteris noctivagans** (LeConte). Silvery Bat.
Specimens: Washtenaw, Ingham, Huron, Arenac (Charity Island), Livingston.

68. **Eptesicus fuscus** (Beauvois). Large Brown Bat.
Specimens: Washtenaw, Houghton, Keweenaw (Isle Royale), Oscoda.

69. **Nycteris borealis** (Müller). Red Bat.
Specimens: Washtenaw, Kalamazoo, Ingham, Kent, Arenac (Charity Island), Oscoda.

70. **Nycteris cinerea** (Beauvois). Hoary Bat.
Specimens: Washtenaw, Kalamazoo, Dickinson.
Records: Ingham, Montcalm.

FOSSIL SPECIES.

1. **Elephas columbi** (Falconer). Columbian Mammoth.
   Specimens: Jackson.

2. **Elephas primigenius** (Blumenbach). Northern Mammoth.
   Specimens: Jackson.
   Records: Van Buren, Macomb, Eaton, Clinton, Saginaw.

3. **Mammut americanum** (Kerr). Mastodon.
   Specimens: Washtenaw, Wayne, Livingston, Lenawee.
   Records: Monroe, Hillsdale, Berrien, Van Buren, Macomb, Eaton, Muskegon, Montcalm, Gratiot, Saginaw, Bay, Allegan, Jackson, Shiawassee.

4. **Castoroides ohioensis** (Foster). Giant Beaver.
   Specimens: Washtenaw, Shiawassee.
   Records: Lenawee, Lapeer.

5. **Platygonus compressus** (LeConte). Peccary.
   Specimens: Ionia.

6. **Bootherium sargenti** (Gidley). Musk Ox.
   Record: Type locality, Muskegon County.

Map of Michigan, Showing Location of Counties